Draw-an-ecosystem For the teacher or environmental educator

The draw-an-ecosystem task can be used as a pre or post test for a course or activity. It can be a way to start conversations such as “What ecosystems to we tend to think of the most.” Or “What things do we commonly recognize as being in an ecosystem.” In my classes, I remind students that these will not be graded, I simply want to know where we are starting from. If you are doing a pre and post for a course, you still do not have to worry about matching individual pre and post drawings, as you can score a class in the aggregate with the scoring rubric.

When using the draw-an-ecosystem activity, remind students that they do not have to be artists; you simply want to know what they are thinking. Of course, very young children are all artists and will not worry about whether they are perceived or judged as “artists” or not. High school and college students might need reassurance. Usually, older children and adults just need a quick reminder to draw what comes to mind and not to worry about the artistic issues.

We have noticed a distinct change in how college freshman draw ecosystems after they complete our 4 credit-hour introductory environmental science lecture and laboratory course. The post drawings become a little more complex. People become more likely to show processes, and to include subsurface features.

Sometimes we just hand out a blank paper. Sometimes we supply markers, colored pencils, or crayons. Sometimes we use the example below, which provides a simple box to draw in. We tested the scoring rubric with environmental educators at a Maine Environmental Education workshop and found a similarity to scoring. There may be a scoring bias among different scorers but that bias tends to be fairly consistent and low. Drawings that received high or low scores tended to do so consistently among the different scorers, but I did not do a statistical analysis on that data.

Each scoring category can receive a score of 0, 1, 2, or 3. Thus the lowest score is 0 and the maximum is 24. The eight categories for scoring are:

1. Nutrient cycling

2. Energy input

3. Geosphere

4. Tropic levels

5. Human interactions

6. Hydrosphere/cycle

7. Atmosphere

8. General systems/environmental issues

Activity *Draw an Ecosystem* Date:\_\_\_\_\_\_\_\_\_

Please draw an ecosystem in the space below. It can be any ecosystem. Label ecosystem processes and concepts in your diagram. Take about 15 or 20 minutes. This will not be graded.